

**Remarks/Arguments:**

Reconsideration of the application is requested.

Claims 9, 11-14, and 16 are now in the application. Claims 9 and 13-16 have been amended. Claims 10 and 15 have been cancelled. Claims 1-9 were previously cancelled.

In paragraph 1 on page 2 of the above-identified Office action, the Examiner stated that the previously presented drawing changes are not acceptable because the highlighted changes do not match with the original drawing (assumed to mean changed drawing).

The highlighting apparently covered up certain features when the paper was photocopied. The drawing changes have been resubmitted. In Fig. 2, the labels, "Retention Time", "Ret. Time", and "Test Program" have been added to the upper part. A lower part has been added, which shows the relationship between the conduction bands and the valence bands in good and poor memory cells. Support for the added lower part of the drawing can be found by referring to the specification at page 9, lines 1-9, for example.

In paragraph 3 on page 3 of the above-identified Office action, claims 9-16 under 35 U.S.C. § 112, second paragraph.

More specifically, the Examiner has stated that the body does not support the preamble.

Claim 9 has been amended to address this issue. The claim now defines a method for testing in which a separating step has been defined. The important aspect is that certain memory cells, "poor memory cells", will not retain the stored information after being projected with the light from the tunable light source. The reason that the stored information is not retained in the poor memory cells is because of the lower distance between the valence and conduction bands in the poor memory cells. With regard to the Examiner's question about knowing which devices have the lower distance between the valence and conduction bands, this is inherently known by determining which memory cells have not retained the stored information.

Support for these changes may be found on page 11, lines 1-15 of the Specification of the instant application.

It is accordingly believed that the claims meet the requirements of 35 U.S.C. § 112, second paragraph. Should the

Examiner find any further objectionable items, counsel would appreciate a telephone call during which the matter may be resolved.

In paragraph 8 on page 3 of the Office action, claim 9 has been rejected as being anticipated by IBM Technical Disclosure Bulletin, Feb. 1987 (TDB-ACC-NO: NN87024105) under 35 U.S.C. § 102.

Claim 9 has been amended to better define the invention. Support for the changes may be found on page 11, lines 1-15 of the Specification of the instant application.

Claim 9 now defines a method for testing wafer-level memory chips having memory cells, the method which comprises:

writing to the memory cells so that the memory cells have stored information;

with a tunable light source, projecting light having a specific wavelength and a specific intensity onto the wafer-level memory chips for a predetermined time so that irradiated electrons in defective ones of the wafer-level memory chips, in which a distance between a valence band and a conduction band has a lower value as compared with that of defect-free

ones of the wafer-level memory chips, are transferred into the conduction band from the valence band; and

separating out ones of the memory cells that cannot retain the stored information.

The IBM Technical Disclosure does not include any teaching regarding wafer-level memory chips.

The IBM Technical Disclosure does not teach testing data retention in wafer-level memory chips. There is no specific teaching regarding: writing to the memory cells of wafer-level memory chips, projecting light having a specific wavelength and a specific intensity onto the wafer-level memory chips, or separating out ones of the memory cells that cannot retain the stored information.

In paragraph 2 on page 4 of the Office action, claims 9-16 have been rejected as being anticipated by Bottka (5,365,334) under 35 U.S.C. § 102. Applicant respectfully traverses.

Bottka shows a configuration for measuring the charge carrier concentration in a semiconductor body. In this configuration, a laser source 36 emits laser light onto the surface of a sample 12 via a light guide, by means of which electron-hole-

pairs are generated in this sample 12 and the band distance between the valence band and the conduction band is locally changed.

Due to the so-called "Franz-Keldysh-effect", the thus injected charge carriers change the reflection ability of the sample. In order to measure the same, a light source 16 casts light to the laser-irradiated sample 12 via a light guide 14. Via a further light guide 18, the reflecting light reaches photodetectors 32 which in turn are connected to an analyzer 44 which spectrally evaluates the light reflected by the sample 12 and registered by the detectors 32. It is thus possible to determine the charge carrier distribution in the sample 12.

Bottka thus teaches determining the charge carrier distribution in a semiconductor body by generating electron-hole pairs and by evaluating the reflection ability generated thereby.

One of ordinary skill in the art, however, does not obtain any information for:

writing to the memory cells so that the memory cells have stored information;

with a tunable light source, projecting light having a specific wavelength and a specific intensity onto the wafer-level memory chips for a predetermined time so that irradiated electrons in defective ones of the wafer-level memory chips, in which a distance between a valence band and a conduction band has a lower value as compared with that of defect-free ones of the wafer-level memory chips, are transferred into the conduction band from the valence band; and

separating out ones of the memory cells that cannot retain the stored information.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 9. Claim 9 is, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 9, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 9, 11-14, and 16 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, he is respectfully requested to telephone

counsel so that, if possible, patentable language can be  
worked out.

If an extension of time for this paper is required, petition  
for extension is herewith made.

Please charge any other fees which might be due with respect  
to Sections 1.16 and 1.17 to the Deposit Account of Lerner and  
Greenberg, P.A., No. 12-1099.

Respectfully submitted,



For Applicant

Mark P. Weichselbaum  
Reg. No. 43,248

MPW:cgm

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Lerner and Greenberg, P.A.  
Post Office Box 2480  
Hollywood, FL 33022-2480  
Tel: (954) 925-1100  
Fax: (954) 925-1101